

**NOTES ON THE GENUS *LACCOTREPES* STÅL
(HETEROPTERA: NEPIDAE) IN THE MALAY ARCHIPELAGO,
WITH THE DESCRIPTION OF TWO NEW SPECIES**

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Abstract.—Two new species of *Laccotrepes* are described from Indonesia, *L. celebensis* from Sulawesi, and *L. sondaicus* from Sumbawa and Flores. Nomenclatural and distributional notes are given for *Laccotrepes* species occurring in the Malay Archipelago.

Here we describe two new species of *Laccotrepes* from Indonesia, *L. celebensis* from Sulawesi, and *L. sondaicus* from Sumbawa and Flores. The names are needed for a work on nepid male genitalia in preparation by SLK. The new species are compared to other Australasian species, which comprise an assemblage that is taxonomically separate from the African nepid fauna. Zoogeographically the Australasian and African *Laccotrepes* overlap only in Iran (see Polhemus, 1995a).

The last major revisionary notes on Australasian *Laccotrepes* were offered by Lundblad (1933), but these only treated a few species. The nomenclatural history of this genus has been complicated by a lack of understanding of species-group taxa named from the region by Linnaeus (1758), Fabricius (1775, 1794, 1803) and Ferrari (1888), and by the lack of any comprehensive modern treatment of the genus, especially for the Oriental region. Montandon (1897) gave synonymical notes on some Ferrari species, and Esaki (1926) published a note on the Linnaean species. Ravisankar and Venkatesan (1988) gave a key to the south Indian species and redescribed two species. Polhemus (1995b) showed that *Laccotrepes fuscus* (L.), long thought to be an Asian species (see Lundblad 1933), is actually synonymous with the common African species known until recently as *L. brachialis brachialis* Gerstaecker. Poisson (1965) furnished a catalog of nepid taxa from Africa along with figures of the male parameres of all known African species, but even such a minimal treatment is unavailable for the Orient.

A work is in progress by JTP to analyze the scattered and arcane literature, establish synonymies, furnish an analysis of type specimens, redescribe all Australasian species, and provide a key. This revisionary work has progressed sufficiently to be certain that the new species proposed here have not previously been described. One of us (JTP) has studied the enigmatic Ferrari types held in the Naturhistorisches Museum of Wien in this regard in an effort to preclude further synonymy.

The following notes concern the *Laccotrepes* species of the Malay Archipelago, including the Philippines and the island of New Guinea. The Australian *L. tristis* (Stål) is distinct and closely related to *L. papuus* Montandon of New Guinea, however quite unlike the other species found in the Malay Archipelago, having a tumid mesosternum and lacking a significant basal protuberance on the fore femur.

Below, *L. celebensis* n. sp. is compared with members of the Australasian *Lac-*

cotrephes grossus group. This group is presently comprised of six species: *L. tristis* (Stål), *L. celebensis* n. sp., *L. grossus* (F.), *L. papuus* Montandon, *L. robustus* Stål, and *L. pfeiferiae* (Ferrari); the latter five occur in the Malay Archipelago as broadly defined here, and may be separated by the characters given in Table 1.

Laccotrephes grossus (F) is the most common and widespread of these species, occurring throughout most of tropical Asia. *Laccotrephes papuus* Montandon is currently known only from the island of New Guinea, where it is uncommon. *Laccotrephes robustus* Stål and *L. pfeiferiae* (Ferrari) have been treated by various authors as synonyms, however here we treat them as distinct species, with *L. robustus* currently restricted to the Philippines, and *L. pfeiferiae* occurring widely throughout the remainder of tropical Asia. Montandon, who extensively studied Asian *Laccotrephes*, vacillated between considering these two species as synonyms or distinct species, but near the end of his studies (Montandon, 1909) he decided that *L. pfeiferiae* was a good species, mainly based on the shape of the prosternal carina when viewed laterally. Here we concur, as several somatic characters seem to consistently separate them (Table 1, and Figs. 6C, 6D).

The somatic characters found to be most useful in species discrimination are the shape and setiferation of the antennae, the shape of the prosternal carina and setiferation along its posterior margin, and to a lesser degree the morphology of the head and eyes (Table 1). The presence or absence of a distinct subdistal tooth in the profemoral groove of males separates species groups, as does body size.

In this work, the junior author has described and illustrated in detail the male genitalia, including deep structures. This analysis is intended to present the latest interpretation of these structures for the genus *Laccotrephes*, and examine their utility, or lack thereof, in the taxonomy of the genus *Laccotrephes* (see Figs. 4, 5, and discussion below under the species descriptions). Discouragingly, even in the two distantly related species described here, the deep genitalic structures appear to provide only minimal information for species discrimination. The male parameres of *L. sondaicus*, described below, are unique and diagnostic, but in many closely related Australasian species the parameres exhibit only subtle differences.

Materials and methods. The genitalia dissection protocol followed was the one used by Keffer (1996) for the dissection of *Curicta* specimens. Only one modification was made in that protocol. The dried *Laccotrephes* specimens required 20 minutes in hot water for relaxation whereas the more diminutive *Curicta* specimens needed only 10 minutes.

Specimens used for description or comparison were either originally preserved in 75% ethyl alcohol (ETOH), or softened in ETOH if dry mounted, then the debris loosened in an ultrasonic cleaner, sometimes with repeated alternating brushing and ultrasonication to render them clean enough for diagnosis. In some specimens the antennae from one side were removed, cleaned and mounted on a point to properly examine the complement of setae; in a few specimens some of the long setae are broken, leaving only stubs.

All line drawings were prepared with a drawing tube mounted on a Wild stereo microscope, except the sketches of the prosternal carinae in lateral view. The dorsal habitus painting of *L. celebensis* was prepared with an airbrush using a water base acrylic paint, supplemented with charcoal, graphite, and pastels.

The specimens examined in the preparation of this work were mostly collected

Table 1. Comparison of species of the *Laccotrepes grossus* group based on somatic characters.

| | Posterior margin prosternal carina | Antennal setation segments 2 & 3 | Eye length/ eye width; Eye width/ interocular distance | Cephalic carina in lateral view | Eyes above or below vertex in lateral view |
|----------------------|---|--|---|--|---|
| <i>L. celebensis</i> | Setae bordering posterolateral margins only, often sparse | Segments 2 & 3: numerous stiff setae on anterior surface, length = 1/2 width of segment; Segment 3: with ca. 18-24 long, erect setae on ventral surface; bare on basal 1/4 | EL/EW = 20/19; EW/IO = 19/26 | Transverse depression at level of anterior 1/3 of eye | About even with vertex |
| <i>L. grossus</i> | Setae completely surrounding posterior margin | Segments 2 & 3: numerous stiff setae on anterior & ventral surfaces, length +/- width of segment; Segment 3: several rows of ca. 100 setae on ventral surface | EL/EW = 22/17; EW/IO = 17/23 | Broadly interrupted at level of anterior 1/3 of eye or carina low and barely interrupted | Far above vertex |
| <i>L. pfeifferae</i> | Setae bordering posterolateral margins only | Segments 2 & 3: numerous stiff setae thickly set on anterior & ventral surfaces, length = width of segment; Segment 3: several rows of ca. 60-80 erect setae on ventral surface | EL/EW = 30/23; EW/IO = 23/32 | Not, or scarcely interrupted at level of mid-eye | Barely above vertex |
| <i>L. robustus</i> | Setae bordering posterolateral margins only | Segments 2 & 3: stiff setae on anterior surface, length = 1/2 to 3/4 width of segment; Segment 3: with ca. 35-40 long, erect setae on ventral surface, including basally, mainly in one row | EL/EW = 20/20; EW/IO = 20/27 | Deep transverse depression at level of anterior 1/3 of eye | About even with vertex (without microtrichia) |
| <i>L. papuus</i> | Setae completely surrounding posterior margin | Segments 2 & 3: numerous, stiff setae on anterior surface, length = width of segment; Segment 3: with ca. 22-34 curved setae on ventral surface, mainly in one row | EL/EW = 14/13; EW/IO = 13/17 | Distinctly interrupted at level of mid-eye | Below vertex |

by J. T. Polhemus and D. A. Polhemus during several expeditions to the Malay Archipelago, and are in the J. T. Polhemus Collection, Englewood, Colorado. Additional material was borrowed from the following collections: Nico Nieser Collection, Tiel, the Netherlands (NCTN); Naturhistorisches Museum Wien, Vienna, Austria (NHMW). Types are placed in the U. S. National Museum, Washington, D.C. (USNM).

All measurements are given in millimeters. CL numbers following certain localities refer to a coding system used by the authors to cross-reference specimens and collection data.

Laccotrephes celebensis, new species

Figs. 1, 2A, 3A, 4A–D, 6A

Diagnosis. *Laccotrephes celebensis* belongs the Australasian *Laccotrephes grossus* group that is characterized by the presence of a subdistal tooth in the sulcus of the male profemur, and a moderate to large sized body (25–43 mm, without siphon). Differentiating characters are given in Table 1. *Laccotrephes papuus* Montandon and *L. grossus* (F) may immediately be separated from the other three by the prominent fringe of soft erect setae completely surrounding the posterior margin of the broad longitudinal prosternal carina (in greasy or dirty specimens these soft setae may be matted down); these setae are found only along the posterolateral margins of the prosternal carina in *L. celebensis*, *L. robustus* Stål, and *L. pfeiferiae* (Ferrari). The shape of the prosternal carina is diagnostic (see Figs. 6A–E), and particularly useful in separating *L. celebensis* and *L. robustus*; in addition to a different shape in lateral view, the prosternal carina in *L. celebensis* is slightly expanded laterally just caudad of middle, then very slightly constricted cephalad of posterior margin, whereas in *L. robustus* the lateral margins of the prosternal carina are straight.

Description. *Size.* Macropterous male, length, 29–35 mm.; greatest width across hemelytra, 10 mm; length of respiratory siphon, 23–35 mm.

Color. General appearance blackish brown, rarely brown; eyes brown. Legs blackish brown, femora with ragged greyish transverse stripes or annuli; see Figure 1. Abdominal venter brown, abdominal sternites reddish brown. Head, pronotum, scutellum, base of hemelytra, legs clothed with numerous tufts of microtrichia.

Structural characters (both sexes). Head long, about 1.1 times as wide across eyes as long in middle; median carina lower than upper level of eyes, distinctly interrupted between eyes, anterior part higher; clypeus and lora well differentiated, maxillary plates large, meeting in front of clypeus; length, 3.77; width, 4.00; interocular space, 1.72. Eyes large, strongly exerted, dorsal surface low, flattened, not raised above vertex, width and length about equal, width 1.11 mm., length, 1.17 mm. Antennal segments two and three very long, two slightly shorter, each inferior surface thickly set with short stiff setae with length about ½ of segment diameter; segment three ventrally set with a sparse row of about 20 long setae.

Pronotum long, broad, very slightly narrowed ahead of humeral angles, lateral margins almost straight, heavily sculptured, with a pronounced longitudinal carina on either side of midline (Figs. 1, 2A); anterior protuberances very high; length, 5.94; posterior width, 10.65; anterior width, 8.71; anterior lobe long, length, 4.00;

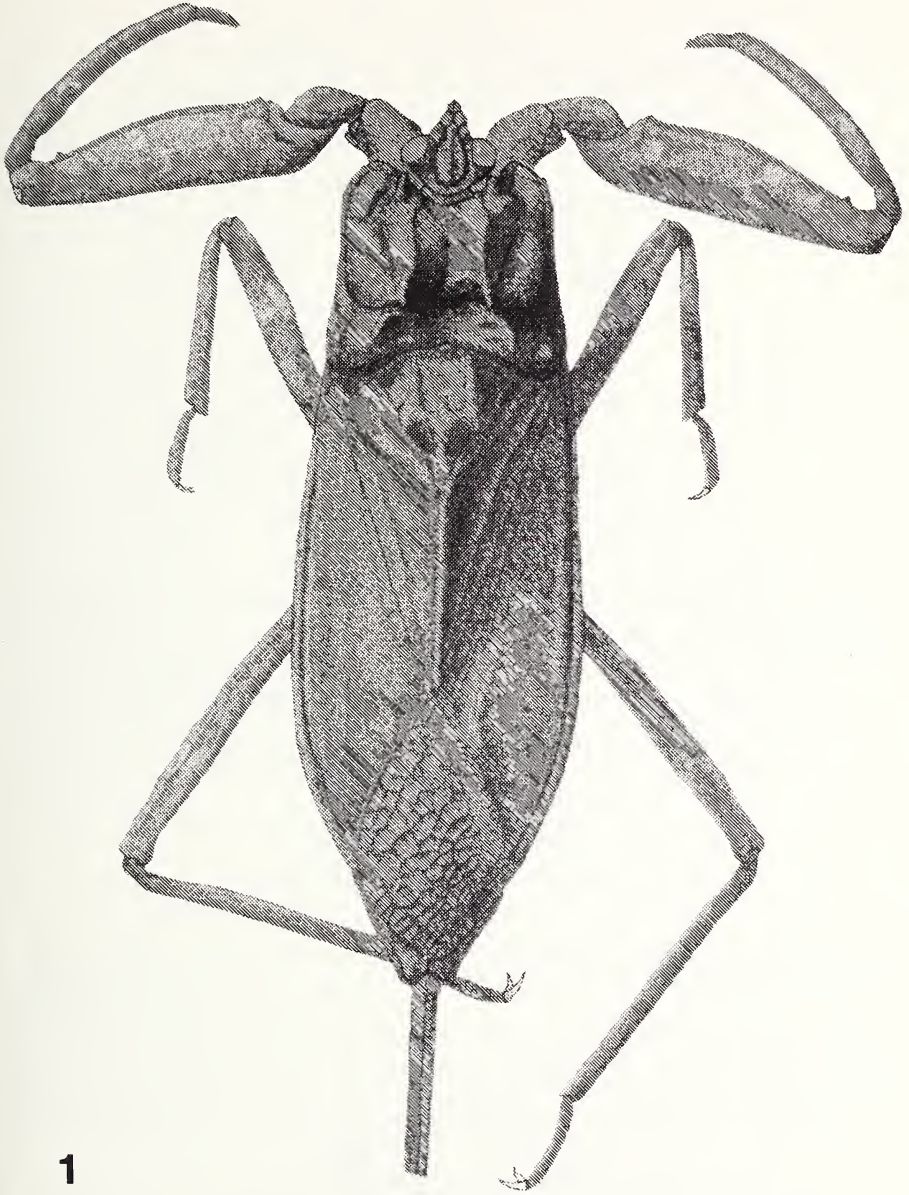
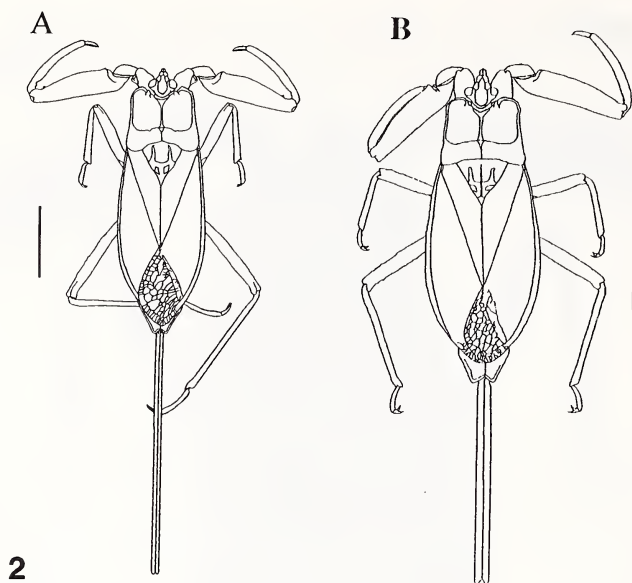
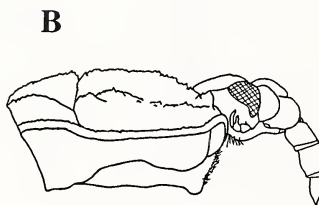
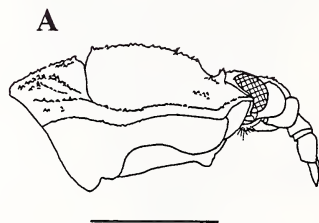
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Fig. 1. *L. celebensis* n. sp., dorsal habitus.



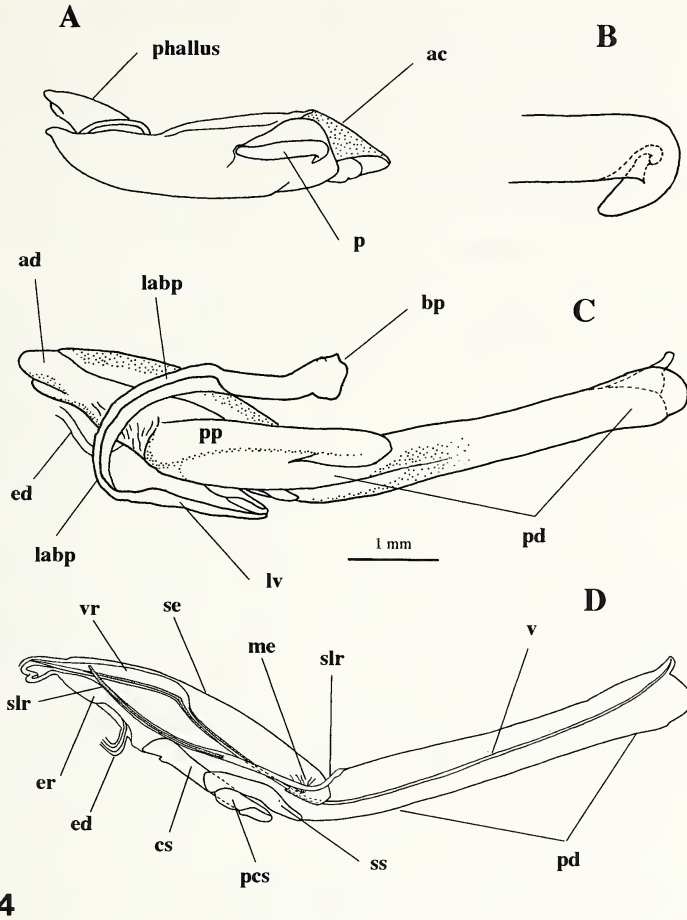
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Fig. 2. A. *L. celebensis* n. sp., dorsal habitus. Scale bar = 10 mm. B. *L. sondaicus* n. sp. Dorsal habitus. Scale bar = 10 mm.



3

Fig. 3. A. *L. celebensis* n. sp., head and prothorax, right lateral view. Scale bar = 5 mm. B. *L. sondaicus* n. sp. Head and prothorax, right lateral view. Scale bar = 5 mm.



4

Fig. 4. *L. celebensis*. n. sp. A. Genital capsule, right lateral view (not to scale). B. Paramere, right laterodistal view (not to scale). C. Phallus, right lateral view. D. Deep phallic structures, right parasagittal view (scale same as 4C).

Symbols: ad, anterior diverticulum; bp, basal plate; cs, central strut; ed, ejaculatory duct; er, ejaculatory reservoir; labp, lateral arm of the basal plate; lv, lamina ventralis; me, membranous endosoma; pcs, process of central strut; pp, phalothecal plate; pd, posterior diverticulum; se, sclerotized endosoma; slr, sclerotized lever rod of vesica; ss secondary strut; v, vesica.

posterior lobe short, length 1.94. Scutellum sculptured, length, 6.22; width, 5.66. Prosternal carina almost straight, with anterior knob moderately raised (Fig. 3A), medially slightly tumid, rarely transversely broadly depressed, posteriorly abruptly truncate; posterolateral angles with a distinct fringe of soft erect setae, absent along posterior margin medially. Legs clothed with usual spines and setae; protibia curved, other tibiae straight. Profemur with basal tooth, and a distinct subdistal tooth set in inner furrow, with corresponding notch in fore tibia (Figs. 1, 2A). Mesofemur stout,

slightly flattened; mesotibia slender, flattened, distally with comb of stout brownish spines. Metafemur long; metatibia long, slender.

Male genitalia. Capsule (Fig. 4A). Elongate, width subequal to height. Heavily sclerotized laterally and darkly pigmented; membranous midventrally, broadly so more posteriorly. Anal cone (ac) well sclerotized and darkly pigmented. Parameres (p) distally with simple, blunt hook forming ca. 45° with paramere body (Fig. 4B); distal margin smoothly rounded. In lateral view anterior diverticulum (ad) and lateral arms of the basal plate (labp) of phallus visible projecting anterosuperiorly through anterodorsal capsule opening; distal posterior diverticulum (pd) visible inferior to anal cone and distal to posteroventral margin of capsule.

Phallus (Fig. 4C). Bridge (b) and basal plates (bp) heavily sclerotized, darkly pigmented. Bridge composed of two symmetrical sclerites attached in midline. Lateral arms of basal plates (labp) arch posteriorly then ventrally; entire (not bipartite as in *Nepa* (Keffer, et al., 1990) and *Curicta* (Keffer, 1996)). Labp unite ventrally to form midventral lamina ventralis (lv) which projects posteriorly to articulate with ventroposterior end of central strut (cs). Anterior diverticulum (ad) elongate, sclerotized and darkly pigmented; in lateral view lying at ca. 45° angle to posterior diverticulum (pd); clearly delimited from phallothecal plates (pp) by vertical and horizontal sutures; ventrally open except proximal tip; dorsally connected to medial sclerotized endsoma (se), and to phallothecal plates (pp) posterolaterally. Phallothecal plates heavily sclerotized, darkly pigmented; proximal inner walls of pd continuous medially with membranous endsoma (me) and laterally to medial surface of distal phallothecal plates.

Deep phallic structures (Fig. 4D). Single, median central strut (cs) sclerotized, darkly pigmented; articulating posteriorly with distal end of lamina ventralis (lv). Just dorsal to this articulation, central strut produced laterally into symmetrical, process of the central strut (pcs) which, in lateral view, begin narrowly and then expand inferiorly as they course anterosuperiorly. Anteriorly central strut weakly bifurcate, partially hollowed out, and attached to posterior end of the ejaculatory reservoir (er). Paired, symmetrical secondary struts (ss) flanking central strut sclerotized and darkly pigmented; articulates anteriorly with apodemes of proximoventral inner phallothecal plate. Posteriorly secondary struts lie in shallow depressions in ventrolateral walls of posterior diverticulum such that only their distal tips visible in lateral view. Ejaculatory duct (ed) passes between lateral arms of the basal plates (labp) to empty into elongate ejaculatory reservoir (er) which tapers anteriorly to a slender duct which runs short distance anteriorly before entering under ventral surface of vesical rod (vr). Vesical rod travels the length of phallus from proximal anterior diverticulum (ad) to tip of spout-like structure at end of posterior diverticulum (pd). It can be divided into three parts based on cross-sectional morphology. For ca. proximal one-fourth of its length, vr is an inverted, broad, and shallow U-shape, with a prominent median, hyaline dorsal keel. As vr descends into phallotheca, the dorsal fin of vr recedes abruptly and short, symmetrical, dorsolateral processes appear. Simultaneously, vr ventrally draws up into an oval shape that is nearly closed midventrally. As vr continues its descent into the phallotheca and then passes into the posterior diverticulum (pd), first the dorsal keel and then the dorsolateral processes are lost and the ventral surface opens into a broad, square, inverted-U framed dorsally by a thin, sclerotized roof and laterally by thicker, sclerotized walls. A pair

of symmetrical sclerotized lever rods (slr) attached laterally to vesical rod just posterior to posterodorsal margin of anterior diverticulum and from there descend into phallosome forming shallow concavity before ascending to, and terminating in, proximal part of dorsolateral margin of posterior diverticulum (pd). Proximal one-half of each slr has darkly pigmented core, distally slr's are hyaline. Sclerotized endosoma (se) arches over vr/v from posterodorsal margin of anterior diverticulum (ad) to floor of proximal posterior diverticulum (pd) where becomes membranous (me) and is inverted around vesical rod (vr).

Macropterous female. *Size:* Length, 32–33 mm.; greatest width across hemelytra, 11 mm; length, respiratory siphon, 27–30 mm.

Similar to male except usually slightly larger, profemur without subdistal tooth, abdomen slightly more expanded. Subgenital plate long, slightly exceeding tip of abdomen, with a pair of lateral lobes distally.

Etymology. The species name *celebensis* derives from the island of origin, the Celebes, also known as Sulawesi.

Distribution. Indonesia; Sulawesi, central and northern.

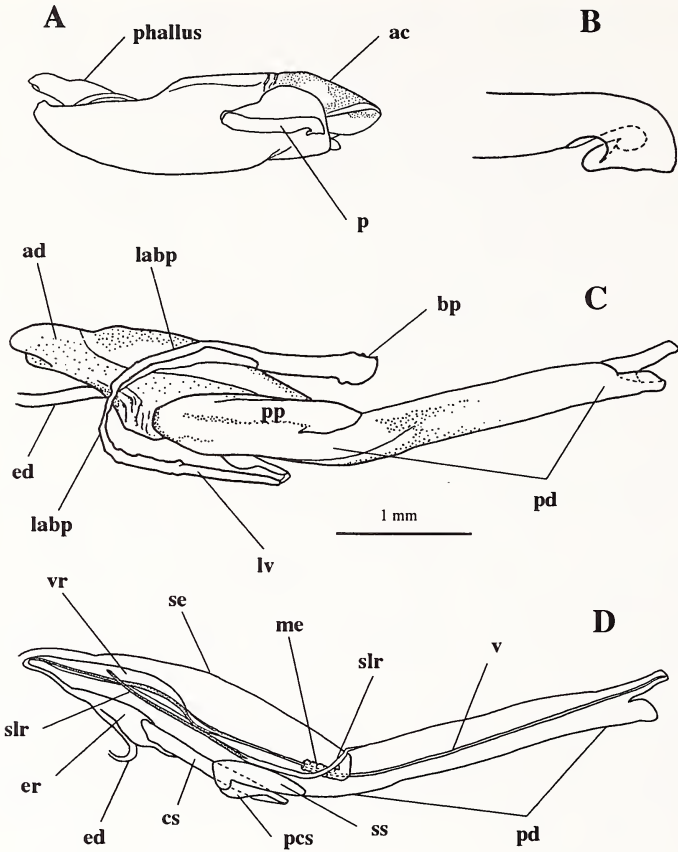
Material examined. Holotype, ♂, INDONESIA, Celebes, **Sulawesi Tengah Prov.**, pond, ca. 1 km. S of Kamarora, el. 660 m, CL 2158, 8.x.1985, J. T. & D. A. Polhemus (USNM). Paratypes: Indonesia, **Sulawesi Tengah Prov.:** 12 ♂, 11 ♀, same data as holotype (JTPC, USNM, NCTN, NHMW); 1 ♀, 10 km. S of Kamarora, el. 950 m, CL 2156, 8.x.1985, J. T. & D. A. Polhemus (JTPC); 1 ♂, 16 km. SE of Palu, el. 200 m, CL 2162, 10.x.1985, J. T. & D. A. Polhemus (JTPC). **Sulawesi Utara Prov.:** 1 ♂ forest streamlet above Lake Mala, el. 1100 m, CL 2114, 9.ix.1985, J. T. & D. A. Polhemus (JTPC); 1 ♀, forest stream S. of Lake Mala, el. 1200 m, CL 2118, 11.ix.1985, D. A. Polhemus (JTPC); 1 ♂, stream 8 km S. of Doloduo in thermal area, CL 2110, 7.ix.1985, J. T. & D. A. Polhemus (JTPC); 2 ♂, small stream in coconut grove, near Desa Kelabat, 23.vii.1994, N 9453A, N. Nieser (NCTN, JTPC).

Laccotrephes sondaicus, new species

Figs. 2B, 3B, 5A–D

Diagnosis. *Laccotrephes sondaicus* may be easily separated from other Australasian *Laccotrephes* species by the moderately large size, laterally dilated abdomen, lack of long setae on antennal segment three, and unique male parameres (all others with distal blade rounded ventrally, rather than truncate ventrally as in *sondaicus*; see Fig. 5B). *Laccotrephes papuus* is approximately the same size, but it is a narrower species, the abdomen is less dilated, and the interocular space is 1.5 times eye width (vs. 2 times eye width in *L. sondaicus*). *Laccotrephes sondaicus* is also unique in having the posterior margin of the metasternum curved (vs. straight or almost so in other species), posterolaterally with two (1 + 1) finger-like projections along the hind coxae.

Only one of the noted differences in genitalia between these two new species can be considered diagnostic (see below). The paramere hook of *L. sondaicus* (Fig. 5B) is unique in the genus (personal observation, SLK) whereas the paramere hook of *L. celebensis* is not uncommon. None of the other genitalic differences noted for these two species can be considered diagnostic because the character variation seen



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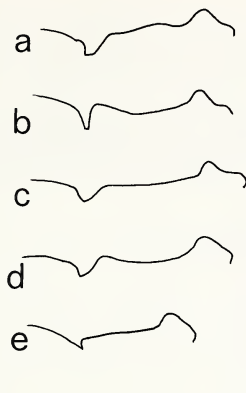
Fig. 5. *L. sondaicus*. n. sp. A. Genital capsule, right lateral view (not to scale). B. Paramere, right laterodistal view (not to scale). C. Phallus, right lateral view. D. Deep phallic structures, right parasagittal view (scale same as 5C).

Symbols: ad, anterior diverticulum; bp, basal plate; cs, central strut; ed, ejaculatory duct; er, ejaculatory reservoir; labp, lateral arm of the basal plate; lv, lamina ventralis; me, membranous endosoma; pcs, process of central strut; pp, phalothecal plate; pd, posterior diverticulum; se, sclerotized endosoma; slr, sclerotized lever rod of vesica; ss secondary strut; v, vesica.

in these species is also found in other *Laccotrephes* species (personal observation, SLK).

Description. *Size.* Macropterous male, length, 26–27 mm.; greatest width across hemelytra, 9–10 mm; length, respiratory siphon, 15–19 mm.

Color. General appearance blackish brown; eyes brown. Legs blackish brown, femora with ragged greyish transverse stripes or annuli. Abdominal venter dark brown. Head, pronotum, scutellum, base of hemelytra, legs sparsely clothed with tufts of microtrichia.



6

Fig. 6. *Laccotrepes* spp., prosternal carina and anterior part of mesosternum, sagittal section (lateral view, anterior to right). A. *L. celebensis* n. sp. B. *L. grossus* (F). C. *L. pfeifferiae* (Ferrari). D. *L. robustus* Stål E. *L. papuus* Montandon.

Structural characters (both sexes). Head long, very slightly wider across eyes than long in middle; median carina much higher than upper level of eyes, weakly transversely depressed between eyes, anterior and parts of about equal height; clypeus and lora well differentiated, lora large; maxillary plates very large, not quite meeting in front of clypeus (Fig. 3B); length, 2.94; width, 3.05; interocular space, 1.50. Eyes small, exerted, dorsal surface low, flattened, well below vertex, width and length about equal, width 0.72 mm., length, 0.72 mm. Antennal segment two short, about half the length of three, three of moderate length; segment two constricted distally, set with short stiff setae; segment three with short stiff setae only distally, without long setae. Pronotum long, broad, slightly narrowed ahead of humeral angles, slightly widened anteriorly, lateral margins straight medially, moderately sculptured, with a low longitudinal carina on either side of midline (Fig. 2B); anterior protuberances pronounced; length, 3.77; posterior width, 7.33; anterior width, 6.05; anterior lobe long, length, 2.50; posterior lobe short, length 1.39. Scutellum sculptured, length, 4.16; width, 4.03. Prosternal carina broad, slightly convex, sloping posteriorly, evenly curved to posterior margin, with anteriorly knob only slightly raised (Fig. 3B), not posteriorly truncate; not bordered by soft erect setae. Metasternum with posterior margin curved, posterolaterally with two (1 + 1) finger-like projections along the hind coxae. Mid tibia clothed with usual spines; mid and hind tibia and tarsi with long swimming hairs; protibia curved, other tibia straight. Profemur with a low basal protuberance, without a distinct subdistal tooth in inner furrow (Fig. 2B). Mesofemur stout, very slightly flattened; mesotibia slender, flattened, distally with comb of stout brownish spines. Metafemur long, flattened; metatibia long, slender, flattened.

Male genitalia. (Only those features that differ from the description of *L. celebensis* n. sp. are described.)

Capsule (Fig. 5A). Paramere hook (Fig. 5B) approximately parallel to plane of paramere body; distal margin not smoothly rounded, forms ventroposterior angle.

Phallus (Fig. 5C). Outer wall of posterior diverticulum (pd) distally produced into

a bilobed, posteriorly directed process. Inner posterior diverticulum wall produced distally into elongate spout that is not broader proximally. Secondary struts (ss) not visible in lateral view.

Deep phallic structures (Fig. 5D). *Laccotrephes sondaicus* differs slightly from *L. celebensis* in the shape of the secondary struts (ss), the central strut (cs) anteriorly, and the courses followed by the vesical rod (vr) and sclerotized lever rods (slr) through the phallosheca.

Macropterous female. Length, 27 mm; greatest width across hemelytra, 10 mm; length, respiratory siphon, 19–20 mm.

Similar to male except larger, profemur without subdistal tooth, abdomen slightly more expanded. Subgenital plate long, narrowly quadrate distally, not exceeding tip of abdomen, with a small pair of lateral angles distally.

Etymology. The species name *sondaicus* is derived from the lesser Sunda Islands, where this species is apparently endemic on the islands of Flores and Sumbawa.

Distribution. Indonesia; Flores, Sumbawa.

Material examined. Holotype. ♂, INDONESIA, **Nusa Tenggara Timur Prov.**, Flores, clear stream, 19 km. SE of Ruteng, el. ~1500 m, CL 2182, 25.x.1985, J. T. & D. A. Polhemus (USNM). Paratypes: Indonesia, **Nusa Tenggara Timur Prov.**, Flores: 1 ♂, 2 ♀, same data as holotype (JTPC). **Nusa Tenggara Barat Prov.**, Sumbawa: 1 ♂, 1 ♀, Madsewu river, 2 km above Badindi, 61 km NW of Bima, 750 m, CL 2174, 20.x.1985, J. T. & D. A. Polhemus (JTPC).

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